

Amendments to the Specification

[0022] The concept of an effective melting point temperature arises by considering the concept of a melting point temperature when applied to candle fuels such as waxes and mixtures of waxes. Candles waxes are hydrocarbon compounds, which have long chain molecules and typically comprise esters and fatty acids. A wax having a single wax compound is said to be a "Narrow Cut Wax" and will have a melting point temperature at which ~~[[is]]~~ it will change from a solid to a liquid state quickly. However, most candle waxes are "Broad Cut" or blends of multiple different wax compounds each of which may have a different melting point so the candle blend does not have a precise melting point but instead it melts over a temperature range, which is usually not noticeable to a candle user. Each component compound will melt at its melting point temperature but the blended composition as a whole will ordinarily appear to also exhibit a melting point. In doing so, as a wax is heated, its plasticity increases until finally its viscosity become so low that it will flow in a liquid manner and therefore appears to melt. The apparent melting point for a blended composition is called the effective melting point temperature. It is the temperature at which the blend begins to flow sufficiently rapidly that it acts like a liquid wax. Consequently, in the present invention, the effective melting point temperature is the important characteristic and is referred to simply as the melting point temperature or the melting point.

[0024] The lower fuel region 16 is located axially below the wick and is cylindrical, preferably has a diameter less than the diameter of the upper fuel region 12 so it will not be visible. However, as shown in Fig. 4, the lower fuel region ~~16~~ 46 can be substantially the same diameter as the upper fuel region ~~12~~ 42, ~~as shown in Fig. 4~~. Additionally, the lower fuel region can be any variety of geometrical shapes and sizes, including frusto-conical, as shown in Figs. 6, square cylindrical, or rectangular provided the lower fuel region is located below the wick.

[0026] Similarly, if the candle has a wick and sustainer, as shown in Fig. 4, the wick 44 and sustainer 48 will submerge together and extinguish the flame as illustrated in Fig. 5. Because most sustainers are made of an impervious, relatively heavy material, such as metal, the sustainer provides an increased downward force, like an anchor, to assist in submerging the wick. The submergence of the wick 14 into the liquefied wax prevents flashover because the flame 15 is extinguished before the depth of the molten wax gets sufficiently thin for flashover to occur. Leakage of molten wax onto a support surface is prevented because the candle is extinguished before the molten pool 43 reaches the bottom surface of the Candle.

[0029] The void illustrating this method is preferably cylindrical as illustrated in Fig.1. However, a variety of shapes are available including frusto-conical as shown in Fig. 6. For example, a candle 30 can initially be formed entirely of a higher melting point

wax. A void can then be formed by drilling a hole through the bottom surface of the candle 30 and into the upper fuel region 32 below the sustainer 38 and the wick 34. The lower melting point wax 36 is inserted into the hole, either by pouring it in while in a molten state or by inserting a wax plug.